

MINUTES OF THE  
MARICOPA ASSOCIATION OF GOVERNMENTS  
AIR QUALITY TECHNICAL ADVISORY COMMITTEE MEETING

Thursday, March 29, 2007  
MAG Office  
Phoenix, Arizona

MEMBERS PRESENT

Stephen Cleveland, City of Goodyear, Chairman	Amanda McGennis, Associated General Contractors
Jess Segovia, Avondale	Spencer Kamps for Connie Wilhelm-Garcia, Homebuilders Association of Central Arizona
Michael Salisbury for Lucky Roberts, Buckeye	*Stephen J. Andros, American Institute of Architects - Central Arizona
#Jim Weiss, Chandler	#Mannie Carpenter, Valley Forward
#Jamie McCullough, El Mirage	*Kai Umeda for Patrick Clay, University of Arizona Cooperative Extension
Lisa Taraborelli for Tami Ryall, Gilbert	Beverly Chenausky, Arizona Department of Transportation
Doug Kukino, Glendale	Peter Hyde, Arizona Department of Environmental Quality
Scott Bouchie, Mesa	#Wienke Tax, Environmental Protection Agency
Joe Gibbs for Gaye Knight, Phoenix	Jo Crumbaker, Maricopa County Air Quality Department
Andrew Kocisky for Larry Person, Scottsdale	*Duane Yantorno, Arizona Department of Weights and Measures
#Amy Scott for Antonio DeLaCruz, Surprise	*Ed Stillings, Federal Highway Administration
Oddvar Tveit, Tempe	*Judi Nelson, Arizona State University
*Walter Bouchard, Citizen Representative	*B. Bobby Ramirez, Salt River Pima-Maricopa Indian Community
Corey Woods, American Lung Association of Arizona	*David Rueckert, Citizen Representative
Wendy Crites for Barbara Sprungl, Salt River Project	
Brian O'Donnell, Southwest Gas Corporation	
Mark Hajduk, Arizona Public Service Company	
#Vic Dugan for Gina Grey, Western States Petroleum Association	
Betsy Turner for Randi Alcott, Valley Metro	
Dave Berry, Arizona Motor Transport Association	
Jeannette Fish, Maricopa County Farm Bureau	
Russell Bowers, Arizona Rock Products Association	
*Michelle Rill, Greater Phoenix Chamber of Commerce	

\*Members neither present nor represented by proxy.  
#Participated via telephone conference call.  
+Participated via video conference call.

OTHERS PRESENT

Lindy Bauer, Maricopa Association of Governments	Steve Trussell, Arizona Rock Products Association
Cathy Arthur, Maricopa Association of Governments	Jody Noble, Environmental Stabilization Solutions
Taejoo Shin, Maricopa Association of Governments	Jane McVay, Arizona Department of Transportation
Dean Giles, Maricopa Association of Governments	Craig Anderson, East Valley Tribune
Julie Hoffman, Maricopa Association of Governments	Barb Sylvester, Brown & Caldwell
Patrisia Navarro, Maricopa Association of Governments	Shane Kiesow, City of Apache Junction
Ieesuck Jung, Maricopa Association of Governments	Randy Harrison, D.L. Withers Construction
Matt Clark, Maricopa Association of Governments	Maureen Zeise, Inter Tribal Council of Arizona
Dennis Fitz, University of Southern California, Riverside	Daniel Blair, Gila River Indian Community
Diane Arnst, Arizona Department of Environmental Quality	Roman Orona, Ak-Chin Indian Community
Scott Di Biase, Pinal County Air Quality	Kendra Tso, Ak-Chin Indian Community
Mario Saldamando, City of Goodyear	Andrea Martin, Arizona Department of Agriculture
	#Doris Lo, Environmental Protection Agency

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on March 29, 2007. Stephen Cleveland, City of Goodyear, Chair, called the meeting to order at approximately 1:40 p.m. Jamie McCullough, City of El Mirage; Jim Weiss, City of Chandler; Amy Scott, City of Surprise; Mannie Carpenter, Valley Forward; Wienke Tax, Environmental Protection Agency; Doris Lo, Environmental Protection Agency; and Vic Dugan, Exxon Mobil, attended the meeting via telephone conference call.

2. Call to the Audience

Mr. Cleveland stated that, according to the MAG public comment process, members of the audience who wish to speak are requested to fill out comment cards, which are available on the table adjacent to the doorway inside the meeting room. Citizens are asked not to exceed a three minute time period for their comments. Public comment is provided at the beginning of the meeting for nonagenda items and nonaction agenda items. Mr. Cleveland noted that no public comment cards had been received.

3. Approval of the March 1, 2007 Meeting Minutes

The Committee reviewed the minutes from the March 1, 2007 meeting. Peter Hyde, Arizona Department of Environmental Quality, requested changes to the first full paragraph on page four of the minutes. He stated that heights should be changed to meters. Russell Bowers, Arizona Rock Products Association, moved and Scott Bouchie, City of Mesa, seconded and the motion to approve the March 1, 2007 meeting minutes as corrected carried unanimously.

4. Approval of the March 6, 2007 Meeting Minutes

The Committee reviewed the minutes from the March 6, 2007 meeting. Lisa Taraborelli, Town of Gilbert, moved and Joe Gibbs, City of Phoenix, seconded and the motion to approve the March 6, 2007 meeting minutes carried unanimously.

5. Approval of the March 9, 2007 Meeting Minutes

The Committee reviewed the minutes from the March 9, 2007 meeting. Corey Woods, American Lung Association of Arizona, moved and Mark Hajduk, Arizona Public Service Company, seconded and the motion to approve the March 9, 2007 meeting minutes carried unanimously.

6. Status Report on Agricultural Measures

Jeannette Fish, Maricopa County Farm Bureau, provided a status report on agricultural measures. She indicated that the Governor's Agricultural Best Management Practices (BMPs) Committee met on February 20, 2007 and voted to double the requirements for farmers within the PM-10 nonattainment area. Ms. Fish stated that farmers with 10 acres or more would be required to implement two BMPs on each land category instead of the current one. Mr. Cleveland inquired about the land categories. Ms. Fish responded that there are the three categories: tillage and harvest, noncropland, and cropland. She indicated that the Governor's Agricultural BMPs Committee also added one more BMP which is to refrain from tillage between 2:00 and 8:00 a.m. on High Pollution Advisory days for PM-10 under stagnation conditions at their February 20, 2007 meeting.

Ms. Fish reviewed the four new BMPs adopted in January 2007: precision farming, transgenic crops, green chop, and integrated pest management. She indicated that the agricultural community will ask that the full rule-making procedure be waived so that new requirements and BMPs will take effect very quickly, hopefully by June. She indicated that doubling the requirements for farmers within the PM-10 nonattainment area would be a change in law. The other BMPs are a rule-making procedure. Ms. Fish stated that once the rules are in place the next steps are education to make farmers aware of the changes in rules and publication of new Guide to Agricultural PM-10 Best Management Practices booklet. She mentioned that the Arizona Department of Agriculture has set aside funds.

Mr. Bowers commented on agricultural activity on tribal lands during high wind days. He inquired about BMPs on tribal lands. Ms. Fish replied that the State of Arizona cannot govern tribal lands; however, the tribes, in general, have already adopted a general requirement to ask farmers to follow the BMPs. She stated that to her knowledge, they are using BMPs.

Mr. Bowers requested a presentation on the Gila River Indian Community Tribal Implementation Plan (TIP). Daniel Blair, Gila River Indian Community, stated that the TIP was recently finalized and is in the process of being submitted to the Environmental Protection Agency (EPA) so that it is federally enforceable. Mr. Bowers indicated that a presentation would be informative to see if there is a correlation of efforts. Wienke Tax, Environmental Protection Agency, clarified that the TIP is not specifically a PM-10 nonattainment plan. It is a more general air quality management plan. She stated that Colleen McKaughan, EPA, will be consulting with the tribes on the agricultural measures. Mr. Cleveland requested that Mr. Blair work with MAG staff on a presentation for a future meeting.

#### 7. Update on the Five Percent Plan for PM-10

Lindy Bauer, Maricopa Association of Governments, provided an update on the Five Percent Plan for PM-10. She indicated that on March 14, 2007, the MAG Management Committee unanimously recommended the Suggested List of Measures to Reduce PM-10 Particulate Matter. At the meeting, it was suggested that the MAG member agencies prepare a list of county unpaved roads that are within the jurisdictions (county island unpaved roads) to assist the Maricopa County Department of Transportation. She stated that the MAG Regional Council met on March 28, 2007 and were requested to take action on the Suggested List of Measures. Prior to the meeting, a memorandum was received from Don Stapley, Supervisor District 2, Maricopa County, with comments on the Suggested List of Measures, which was transmitted to the MAG Air Quality Technical Advisory Committee and MAG Management Committee. In addition, the memorandum is provided at each place. Ms. Bauer stated that the MAG Regional Council took action to approve the Suggested List of Measures to Reduce PM-10 Particulate Matter as recommended by the MAG Air Quality Technical Advisory Committee and the MAG Management Committee with one modification and one addition: (1) to Measure #38 Restrict vehicle use and parking on vacant lots (e.g. Phoenix) by adding the State to the list of implementing authorities; and (2) to add a measure to the Suggested List to grant Maricopa County the ability to assess liens on parcels to cover the costs of stabilization for the parcel; also to direct the MAG Air Quality Technical Advisory Committee at their April meeting to consider the remainder of the recommendations provided in the March 28, 2007 memorandum from Maricopa County to MAG.

Mr. Cleveland asked which measure pertains to the lien provision. Ms. Bauer replied that there was a vacant lot lien measure; however, Maricopa County had concerns when the measure was going through the process about being able to recover the costs. Therefore, the measure was not

recommended. She stated the County has since decided that this would be a good measure. Ms. Bauer indicated that MAG staff will meet with Maricopa County to prepare the language for what the County needs and what the MAG Regional Council has added to the Suggested List of Measures. Mr. Cleveland asked if the measure would need to go the MAG Regional Council for approval. Ms. Bauer replied that the language approved by the MAG Regional Council will be used to add the measure to the Suggested List of Measures.

Mr. Cleveland stated that Maricopa County will report on the comments in the memorandum. He indicated that this item is for information and discussion. Any action would need to be taken at the April meeting due to the requirements of the open meeting law.

Jo Crumbaker, Maricopa County Air Quality Department, stated that the County had concerns about a number of the measures being taken off the Suggested List before it went to the MAG Regional Council. She mentioned the financial and manpower challenges of the Five Percent Plan for PM-10 and indicated that measures should be kept on the table as feasibility is determined. Ms. Crumbaker mentioned preliminary calculations. She stated that it was premature to remove measures before the implementation and the justification for nonimplementation could be completed.

Ms. Crumbaker discussed the details of the memorandum from Maricopa County to MAG regarding the Suggested List of Measures. She indicated that Measure #11, notify violators more rapidly to promote immediate compliance, reflects the historical enforcement philosophy of Maricopa County of contacting whoever is on-site at the time of inspection. Ms. Crumbaker stated that Measure #12, provide timely notification regarding high pollution days, is a logistics challenge. She indicated that the State is the lead for the High Pollution Advisory day notification and forecasts.

Ms. Crumbaker mentioned Measure #31, pave or stabilize existing unpaved parking lots (e.g. upgrade to Phoenix Parking Code) - strengthen enforcement. She stated that many driveways do not accommodate the turning radius of large trucks causing the trucks to track dirt onto the paved street. Ms. Crumbaker stated that the County has concerns with Measure #32, pave and stabilize existing public dirt roads and alleys in terms of the number of miles that could be accomplished within the three year period given the fact that the County has to acquire the right-of-way before stabilizing or paving and dealing with drainage issues.

Ms. Crumbaker mentioned Measure #33, limit speeds to 15 miles per hour on high traffic dirt roads. She discussed traffic safety issues and stated that there is no enforcement on dirt roads. Maricopa County supports Measure #36, create a fund for paving and stabilizing in high pollution areas, except for the second bullet that directs fine monies to this fund. The Board of Supervisors reviews projects and appropriates the collected fine monies for specific projects as necessary to address various air quality projects. Ms. Crumbaker discussed Measure #38, restrict vehicle use and parking on vacant lots (e.g. Phoenix). She stated that the County will need statutory authorization to enact this type of ordinance.

Ms. Crumbaker stated that Maricopa County looked at successful measures being implemented in other areas. The County identified five measures that were eliminated prematurely in the plan development process: ability to assess liens on parcels to cover the costs of stabilizing them, just-in-time grading limitations for construction, reduce the tolerance of trackout to 25 feet before immediate clean up is required for construction sites (Maricopa County has already approved this standard for rock products facilities), no visible emissions at the property line (also already in effect for rock products facilities), and modeling cumulative impacts for permitted sources because of the

effects of multiple sources locating in close proximity to each other. She stated that the memorandum also emphasizes that the nonpermitted sources are big challenges and help from everyone is needed.

Dave Berry, Arizona Motor Transport Association, commented on previous discussion regarding the ability of the Committee to receive more information as it become available on the measures. He stated that the Committee recommended the Suggested List of Measures based on the information available at the time. Mr. Cleveland indicated that the Suggested List includes 41 measures and the Committee has been given direction by the MAG Regional Council to further review the measures included in the memorandum from Maricopa County. Mr. Berry stated that the measures should only be reevaluated to the extent new information becomes available.

Mr. Cleveland stated that since the MAG Regional Council took action on the Suggested List of Measures, each agency with authority to implement the suggested measures will be requested to make a legally binding commitment to implement the measures it deems appropriate or to submit a reasoned justification for nonimplementation. He mentioned the possibility of additional measures being added at the April meeting based on the memorandum. Ms. Bauer stated that since a Suggested List of Measures has been approved by the MAG Regional Council, MAG will prepare a model resolution package which will be sent out to the implementing agencies prior to the April meeting. Any measures recommended by the Committee in April would need to go to the MAG Management Committee and MAG Regional Council in May. Ms. Bauer stated that there may be measures that are not on the Suggested List that agencies commit to implement.

Amanda McGennis, Associated General Contractors, asked if the Committee could make a recommendation at the April meeting to make no changes to the Suggested List of Measures approved by the MAG Regional Council with the one modification and one addition. Ms. Bauer responded that is an option for the Committee. In that case, the recommendation would not need to be forwarded to the MAG Management Committee and MAG Regional Council since it was approved by the MAG Regional Council on March 28, 2007. Ms. McGennis inquired about taking action. Ms. Bauer stated that due to the open meeting law 24-hour notice, no action can be taken on the agenda item at this meeting. Mr. Cleveland stated that the Suggested List of Measures will be sent out to the implementing agencies. Any additional measures recommended in April will be forwarded separately. Mr. Gibbs commented on time constraints for the resolutions.

Mr. Bowers referred to the recommendation in the memorandum from Maricopa County on Measure #36. He inquired about the availability of a list of PM-10 projects that the County could offer under a supplemental environmental penalty program that would allow the violators to direct a portion of their fine to pay for a project without losing an additional percentage to administrative overhead. Ms. Crumbaker stated that the County believes the list needs to be developed. She indicated that the memorandum asks for help in developing a list of projects that reduce PM-10 that contractors may find attractive. Ms. Crumbaker stated that it would be the contractors option to participate in the supplemental environmental penalty program.

Mr. Bowers referred to a comment in the memorandum stating that Maricopa County is very concerned that calculations estimating emission reductions from the current measures on the list may be overly optimistic in the degree of implementation possible given the short timeframes we are striving to meet. He asked if Maricopa County has a different formula than MAG. Ms. Crumbaker stated that the concern of Maricopa County is that MAG used preliminary numbers to prepare the

basis. Maricopa County looked at the number of miles of unpaved roads. She stated that there must be a lot of miles in the cities to meet the goal. Ms. Crumbaker indicated that it is currently taking approximately three years to go through the process of acquiring the right-of-way, addressing the drainage issues, and applying the end product. She discussed the logistics.

Mr. Cleveland stated that there are three types of unpaved roads: Maricopa County, cities, and public roadways. He indicated that nobody has jurisdiction over the public roadways and the process to get jurisdiction over these roads takes nearly three years. Ms. Crumbaker stated that the Maricopa County network is made up of roads that have been open and declared. She noted that some of the unpaved roads do not have dedication to the public. Ms. Crumbaker mentioned the unpaved roads that have not been opened and declared by Maricopa County. In these cases the right-of-way and road itself would have to be acquired. She stated most of these roads are associated with lot splits. Mr. Bowers inquired about seeking lien authority for public common roads.

Mr. Cleveland requested that MAG provide the analysis for determining the number of miles of unpaved roads. Ms. Bauer stated that for unpaved roads, MAG first looked at what has been done in the past. In the 1999 Serious Area Plan for PM-10, collectively the cities committed to pave or stabilize 121 miles of unpaved roads. The County committed to 60 miles. She stated that MAG looked at the GIS database and found approximately 300 miles of unpaved roads between 50 and 150 average daily traffic (ADT). The assumption was that one-third of the unpaved roads would be stabilized and one-third would be paved.

Cathy Arthur, Maricopa Association of Governments, stated that the estimates are very preliminary. She discussed the difficulty of developing a distribution of unpaved roads by ADT. Since traffic counts were not available, MAG used the GIS database, aerial photography, and image recognition software to help identify dwelling units on unpaved roads. Ms. Arthur indicated that the data was manually checked to identify the unpaved roads that actually have traffic and the number of residential dwelling units. A Maricopa County Home Interview Survey determined that there are about nine vehicle trips per day from a residential unit. Ms. Arthur stated that all this information was used to develop a distribution of miles of unpaved roads by ADT. She indicated that there are approximately 300 miles of unpaved roads with 50 to 150 ADT. Ms. Arthur noted that Rule 310.01 already requires paving or stabilizing on unpaved roads with over 150 ADT. Ms. Arthur stated that this is a theoretical exercise; therefore, MAG has a contractor contacting many of the cities to collect any traffic counts and mileage estimates that have been prepared. She indicated that by the end of April there will be a better estimate as to the number of miles of unpaved public roads.

Ms. Arthur stated that there are also many miles of unpaved private roads. She mentioned that aerial photography does not discriminate between private and public unpaved roads. Therefore, the exercise looked at both, and the contractor will be looking only at public unpaved roads. She stated that MAG will need to integrate the two since the 2007 inventory needs to reflect both public and private unpaved roads. The assumption is that the private roads have much lower traffic levels. Ms. Arthur stated that the estimates provided will change as additional information becomes available. She added that the estimates are conservative.

Ms. Bauer stated that the commitments from the MAG member agencies are always impressive. She indicated that she has been asked how MAG knows that cities will commit to implement. She stated that the 1999 Serious Area Plan for PM-10 had four volumes of local government commitments.

Mr. Cleveland stated that the estimates and assumption indicate that 100 miles would be paved and 100 miles would be stabilized. He compared that to the 181 miles paved or stabilized in the 1999 Serious Area Plan for PM-10. Ms. Arthur mentioned the private roads that will not be governed by the new rules. Mr. Cleveland commented on the methodology. Ms. Arthur stated that the Indian Communities have many unpaved roads that carry high ADT. While they are not subject to the rules, they have voluntarily come forward and the 2007 MAG Transportation Improvement Program includes 15 miles of unpaved roads to be paved by the Fort McDowell Yavapai Nation with an ADT of 225. Ms. Arthur noted that the measure is to stabilize or pave unpaved roads and stabilization could occur much faster than three years. She indicated that a city may want to stabilize for the first two years and then pave in the third year; therefore, some benefit would be achieved in the first year.

Ms. Crumbaker stated that stabilization cannot occur until the right-of-way is acquired and the draining issues are addressed, which is a two year process. Ms. Arthur indicated that the cities have a lot of roads between 50 and 150 ADT. Mr. Cleveland asked if the unpaved roads in the County's jurisdiction could be stabilized faster than paving. Ms. Crumbaker responded that there is a two year process to acquire the right-of-way and address the draining issues. Mr. Cleveland asked if that would be the unpaved roads the County does not have jurisdiction over. Ms. Crumbaker replied that Maricopa County has not necessarily acquired the right-of-way to the open and declared unpaved roads. Mr. Cleveland commented on the County paving the roads they own.

Spencer Kamps, Homebuilders Association of Central Arizona, commented that stabilization is required on vacant lots and inquired about the difficulty with stabilizing unpaved roads. Ms. Crumbaker stated that the Maricopa County Department of Transportation listed their concerns in the memorandum. She indicated that a stabilizer changes the surface of the road and there are consequences. Mr. Kamps asked if it is a liability issue. Ms. Crumbaker responded that it is a traffic safety issue. She mentioned property rights, liability issues (traffic safety), and capital funding.

Mr. Berry expressed frustration that certain categories are highly regulated yet there are unpaved roads that are not addressed. He discussed possible solutions. Mr. Cleveland suggested forming a subcommittee to work with the Maricopa County Air Quality Department and Maricopa County Department of Transportation on the issue. Ms. Crumbaker commented that Maricopa County had approximately the same number of unpaved roads as paved roads in the 1980's. She mentioned the progress since then. Mr. Cleveland stated that part of the frustration is the creation of new unpaved roads. He inquired about the contribution of lot splits and wildcat subdivisions to the problem. Mr. Cleveland commented on having a paving requirement in the building permit.

Mr. Bowers mentioned a requirement to stabilize the access point to his property. Mr. Kamps indicated that the legislature has been discussing the issue. He agreed that a permit for a lot split should require some stabilization effort. Mr. Kamps stated that more private dirt roads are being created through lot splits. Mr. Cleveland mentioned refusing to issue a building permit for lot splits unless there is stabilization or paving. Mr. Kamps indicated that language could be added to State law to indicate stabilization or paving is a condition of a building permit. Mr. Cleveland commented on giving Maricopa County the authority necessary and discussed funding. Mr. Kamps stated that there is a bill going through the legislature that allows counties to institute improvement districts for road improvements, specifically to update roads. He indicated that dust suppression could be a component. Mr. Kamps mentioned that credit should be taken in the Five Percent Plan for PM-10.

Mr. Bowers inquired if the road improvements would be for annexation or air quality purposes. He mentioned cities pursuing improvement of property beyond air quality measures. Mr. Cleveland commented on working with the legislature to make sure the bill addresses air quality. Ms. Crumbaker stated that during the last housing boom, some developments went directly to multiple parcels in a single action and did not apply as a single subdivision. Mr. Cleveland mentioned the building permits. Ms. Crumbaker indicated that they have been forwarded to the Attorney General and Arizona Department of Real Estate; however, there has been no resolution. Mr. Cleveland commented on the legislature informing the executive branch. Mr. Kamps stated that the Arizona Department of Real Estate has done a good job on addressing illegal subdivisions. He indicated that there was a period where some people were aggressive in trying to avoid the law. Mr. Cleveland stated that the discussion has provided ideas for the subcommittee.

Mr. Bowers mentioned prior discussion by the Committee to not take anything off the table until more information is received. He indicated that a Suggested List of Measures was recommended and the Committee followed the process. Mr. Bowers discussed the recommendations by Maricopa County in the memorandum and stated that the Committee has reviewed the measures and made a decision based on the information available. He commented on the ability of the MAG Regional Council to take action different than that recommended by the Committee. Mr. Cleveland stated that action on this item will occur at the April meeting.

Mr. Kamps referred to the comments from Maricopa County on Measure #11. Ms. Crumbaker indicated that it is standard procedure for an inspector to stop and talk to someone on-site and inform them that something needs to be done when the inspection is the result of a proactive inspection, a complaint-based inspection, or an occasional stop when they drive by the site. If nobody is on-site, the inspector places a telephone call. In that case, the inspection report follows by mail. Mr. Kamps asked if those on-site are allowed to walk with the inspector throughout the project. Ms. Crumbaker replied that the inspector attempts to find a responsible party on-site to accompany the inspector. She indicated that there is sometimes a reluctance to sign inspection rights and participate.

Mr. Kamps stated that he has been denied the opportunity to accompany the inspector. Ms. Crumbaker indicated that she would not discuss current litigation. She mentioned that those on-site can accompany the inspector. Mr. Kamps stated this is not part of litigation. He indicated that Maricopa County has not typically provided the Notices of Violation (NOVs) immediately. Ms. Crumbaker replied that NOVs are separate from informing the site that there is a violation that has to be corrected. The NOVs are issued after the report is written and it is reviewed by a supervisor. She stated that the first notification is verbally. If it is by telephone, it is noted on the inspection report left on-site.

Mr. Kamps indicated that based on current policy, a site could continue to operate in violation of Rule 310 for days before the NOV is received. Mr. Bowers indicated that Measure #11 would provide a benefit by notifying violators more rapidly to promote immediate compliance.

Diane Arnst, Arizona Department of Environmental Quality, asked if the Draft Sierra Research Analysis of Particulate Control Measure Cost Effectiveness and the Draft Maricopa County 2005 Periodic Emissions Inventory for PM-10 would be finalized before the April meeting. She suggested that the actions taken by the Committee are still preliminary, if these items are not final.

Ms. Arthur stated that the Draft Sierra Research Analysis of Particulate Control Measure Cost Effectiveness will be finalized by the April meeting and will be almost identical to the draft. She



noted that the report only addresses the first 46 measures. Mr. Cleveland asked if the Suggested List of Measures approved by the MAG Regional Council are included in the report. Ms. Arthur replied that the measures received late in the process were not included in the report. Ms. Arnst asked if the report is being revised based on comments received. Ms. Arthur stated that the consultant is working to respond to the comments received at the meetings on the first 46 measures.

Ms. Crumbaker discussed the timeline for the Draft Maricopa County 2005 Periodic Emissions Inventory for PM-10. She stated that there are still some refinements to the windblown model. Ms. Crumbaker asked about updates to the mobile source section. Ms. Arthur stated that the intent was to not update the mobile source section of the inventory with the new SCAMPER values, since the MAG Silt Loading Study was conducted in 2006. She indicated that the new values will be in the base for 2007. Therefore, the paved road PM-10 emissions data is complete for 2005. Ms. Crumbaker stated that with a target date of mid April, the Maricopa County 2005 Periodic Emissions Inventory for PM-10 should be finalized by the April meeting.

Mr. Gibbs commented on a recommendation by Maricopa County in the memorandum to rewrite Measures #4 and #37 to include city codes and ordinances as well as County Rule 310.01 and to add cities as implementing agencies to those measures. Ms. Crumbaker discussed the Salt River Area and stated that nonpermitted sources are consuming a significant amount of time. She mentioned that issues such as unpaved parking lots and unpaved roads have connections to building permits and would involve city building staff. Ms. Crumbaker stated that the message of the County is that the number of nonpermitted sources is more than a single agency can handle. She indicated that everyone needs to help and mentioned initiatives.

Mr. Gibbs asked if the County is envisioning cities adopting Rule 310.01. Ms. Crumbaker replied that cities would do what they can within their general governmental authority. She noted that air pollution is often a result of other problems such as trespassing. Mr. Gibbs discussed the difference between enforcing codes where there is an actual current manifestation of a vehicle versus no vehicle and just tire tracks. He noted that many cities have codes for parking on unpaved areas. Ms. Crumbaker stated that there are more vacant lots than Maricopa County can handle and mentioned enforcement issues. She indicated that it takes more than a single agency to make substantial achievements in a three year time period. Mr. Gibbs stated that he agreed; however, it would be problematic for cities to enforce Rule 310.01. Ms. Crumbaker indicated that cities need to develop their own way to deal with the problem.

Ms. McGennis stated that the Maricopa County memorandum recommended that the just-in-time grading measure be added to the Suggested List of Measures which was voted down by the Committee. She indicated that just-in-time grading is impractical and distributed material. Ms. McGennis stated that the number one issue is that the same dirt would be moved more than once.

Mr. Bowers asked how the Committee sees the work being conducted. He inquired if work should be suspended until the Draft Sierra Research Analysis of Particulate Control Measure Cost Effectiveness and the Draft Maricopa County 2005 Periodic Emissions Inventory for PM-10 are finalized. Mr. Bowers discussed the timeline and asked if the work being conducted is tentative. He suggested waiting until the work is no longer tentative. Ms. Bauer stated that the MAG Regional Council is the decision making body at MAG and have approved the Suggested List of Measures to reduce PM-10 Particulate Matter with one modification and one addition. She indicated that the model resolution package will now be sent out to the implementing agencies.

Mr. Hyde expressed disappointment with the “can’t do” attitude in the Maricopa County memorandum. He indicated that paving dirt roads and placing speed limits on dirt roads are two of the five categories with the most potential for PM-10 reduction. He stated that the two measures total 5,900 tons.

Mr. Cleveland noted that this item is for information and discussion. He indicated that there will be an opportunity at the April meeting for the Committee to consider the measures addressed in the Maricopa County memorandum.

8. MAG Silt Loading Study

Ms. Arthur introduced Dennis Fitz, College of Engineering, Center for Environmental Research and Technology, University of California, Riverside (CE-CERT). She discussed his experience and indicated that MAG contracted with CE-CERT for the MAG Silt Loading Study to improve estimates of particulate emissions from paved roads in the Maricopa County PM-10 nonattainment area. Ms. Arthur indicated that the draft final report has been received, and the data will be utilized in the Five Percent Plan for PM-10 for the 2007 emission estimates. She stated that Clark County (Las Vegas, Nevada) is requesting from EPA official permission to use this approach in lieu of AP-42. Ms. Arthur discussed the legitimacy of the approach and indicated that the process will be documented in the Technical Support Document of the Five Percent Plan for PM-10.

Mr. Fitz discussed the purpose of the study. He stated that emissions were being measured directly with the new device. Mr. Fitz indicated that quantifying PM emissions from paved roads is important because: they are a significant contributor to exceeding standards, estimated inventories of geologic PM are higher than measured concentrations, and AP-42 estimation of emissions due to paved roads are a major component of geologic emissions. He mentioned that emission inventories are difficult to determine because: the fugitive nature leads to high uncertainties for emission factors, current inventories are based on an empirical equation derived from upwind-downwind sampling from primarily industrial roads, modeling is required to determine emission factors from upwind-downwind concentrations, and PM concentration differences are small between upwind and downwind locations for most roads.

Mr. Fitz provided a review of the two methods: AP-42 and System for Continuous Aerosol Measurement of Particulate Emissions from Roadways (SCAMPER) Mobile Approach. He discussed the AP-42 paved road emission equation, which is based on an upwind-downwind filter sampling of PM with monitoring towers. Mr. Fitz indicated that the emission rate is calculated from mass balance and regressed with physical parameters.

Mr. Fitz discussed the SCAMPER approach. He mentioned that this method measures PM directly in front and behind a test vehicle with an isokinetic sampling probe, uses real-time sensors to quickly accumulate large amounts of PM data, determines emission factors based on the concentration within the vehicle’s wake, determines location by GPS, and there is a PC to log all data at one second intervals. He discussed the isokinetic sampling probe which makes particle measurements accurate on a moving vehicle. Mr. Fitz discussed the SCAMPER emission factor calculation which includes a calibration factor to relate DustTrak response to filter-based PM-10 mass measurement.

Mr. Fitz discussed the literature search. He referred to pre-AP-42 and mentioned the Nicholson review 1988. He indicated that there were no citations of research leading to AP-42 and discussed tagged fluorescent dye studies. Mr. Fitz mentioned various upwind-downwind studies conducted

in the 1990's which were limited by the small differences between upwind and downwind concentrations. He indicated that modeling methods included dispersion and receptor modeling. He mentioned that modeling results have unknown uncertainties.

Mr. Fitz discussed the SCAMPER approach for Maricopa County. He provided a map of the test route and mentioned that it took approximately six to seven hours to complete. He discussed the variety of roads on the test route and pointed out the quality control loops. Mr. Fitz indicated that there were test days in March, June, September, and December 2006 for a total of 18 test days. He mentioned the quality control which included routine DustTrak zero and flow rate test, short test loops to determine precision, collocated DustTraks, and PM-10 filtration collection using the EPA approved inlet.

Mr. Fitz discussed the data validation for the SCAMPER approach in Maricopa County. To remove spurious DustTrak data, the data was reported as the five second running average of a five second running median. In addition, all questionable data was flagged and when GPS signals were not received, the data was averaged for the missing one second interval. He noted that for reporting emission rates, only good data were used that were above 10 miles per hour. Mr. Fitz indicated that GPS coordinates were used to determine average emission rates for 69 road segments.

Mr. Fitz discussed the results from the quality control loops. He noted that PM-2.5 was measured in March 2006 and there was a very high relative standard deviation and very low reproducibility due to the low concentrations. As a result, PM-2.5 was not measured during the remaining test days. Mr. Fitz presented the comparison of PM-10 concentrations of rear-mounted DustTraks on June 19, 2006. He provided the data summary for March 2006 and indicated that the average emission rate was 0.094 mg/m and the relative standard deviation was 21 percent. Mr. Fitz noted that there was a drop in emission rates observed on Saturday (last day of sampling). He presented the PM-10 emission rate by road segment and indicated that the mobile system was able to determine the hot spots.

Mr. Fitz indicated that in June 2006, the average emission rate was 0.125 mg/m and the relative standard deviation was 22 percent. He provided the PM-10 emission rate by road segment and noted that the same locations were producing high concentrations. Mr. Fitz stated that in September 2006, the average emission rate was 0.068 mg/m and the relative standard deviation was 28 percent. He indicated that there was a significant weekend effect observed. Mr. Fitz provided the PM-10 emission rate by road segment and paved road weekend-weekday effect. He noted that there are very little emissions on Sunday and significant increase on Monday. Therefore, the reservoir on the road that causes the emissions does not last long and is easily replaced. Mr. Fitz indicated that in December 2006, the average emission rate was 0.087 mg/m and Sunday was an anomaly due to high winds. He provided the PM-10 emission rate by road segment and mentioned that there was some differences.

Mr. Fitz discussed the estimation of the DustTrak Correction Factor. He indicated that EPA has regulations that are mass based, not optical sensor based. Mr. Fitz discussed the linear regression of filter based and DustTrak PM-10 concentrations. He noted that the filters were 4.0 and 3.3 times higher in March and June, respectively, and there was no regression since the filters had about the same amount of loading. In September, the filter was 3.8 times higher and the linear regression had a slope of 3.3. Mr. Fitz indicated that a regression was not done in December and the filter was 2.8 times higher. Overall, the filters (approximately 40 samples) were 3.6 times higher than the

DustTrak concentration. He mentioned that there was a regression with a slope of 3.4 and provided the comparison of all filter and DustTrak PM-10 concentrations. He mentioned that the scatter is likely due to changing optical properties of the dust being sampled in the back of the vehicle. He noted the correlation and stated that the DustTrak is reading less than the filter collection.

Mr. Fitz discussed the EPA acceptance testing. He indicated that Clark County is in phase four of their study. Mr. Fitz stated that they are working with Desert Research Institute (DRI) who has a similar vehicle that measures PM-10 concentrations in the wheel well and in the front of the vehicle and calibration is required. He indicated that this is the first time everything has been done at one location in a controlled environment. Mr. Fitz mentioned that the results will be presented at the EPA Emission Inventory Conference in May 2007. He indicated that he has been working with EPA and the goal is to have EPA accept mobile methods as a preferred alternative to AP-42.

Mr. Fitz discussed the highlights of the study. He indicated that small fractions of roadways are responsible for most of the PM-10 emissions, monitoring of PM-2.5 emission rates is not practical for roads with low PM emission rates, and there are significantly lower weekend emission rates. Mr. Fitz added that no significant seasonal variability was observed, the SCAMPER method has a precision of approximately 25 percent, and although there is considerable scatter in the comparisons, a factor of 3.4 is recommended to compare DustTrak emission rates with filter based methods. He indicated that the advantages of SCAMPER are low cost, no upwind-downwind calibration required, DustTrak (light scattering sensor) calibrated to PM-10 mass measurement during sampling, ability to easily collect large amounts of data, and ability to easily determine PM hot spots.

Mr. Fitz indicated that the SCAMPER results would help with emission inventory compilation which includes the weekend effect. He mentioned focusing on minimizing deposits on roadways for mitigation rather than removing silt and stated that PM-10 emission rates equilibrate rapidly. He also recommended a SCAMPER "light" for enforcement and evaluation of mitigation methods.

Mr. Bowers commented on AP-42 using samples from industrial roads. Mr. Fitz stated that AP-42 was developed primarily by measuring on industrial roads since they had a high enough differential between upwind and downwind. Mr. Bowers asked if the results would have been more conservative using AP-42 versus the SCAMPER approach. He indicated that the typical freeway does not have the silt loading of industrial roads and asked if applying AP-42 to a freeway would result in more conservative numbers. Mr. Fitz replied that the silt loading is lower and the estimated rate would be lower.

Mr. Bowers asked if this methodology is not effective for PM-2.5. Mr. Fitz responded that is correct since the concentration sensitivity is not high enough. He indicated that the methodology does work in areas producing high emissions. Mr. Bowers commented on the excavation at the Pueblo Grande Museum and Archaeological Park. He mentioned dust settling quickly on the roads during dust events. Mr. Fitz stated that large particles settle out very quickly. Mr. Bowers inquired about a correlation between dust events and associated high PM concentrations on the following days as the dust is reentrained. Mr. Fitz replied that a dust event could affect an area for a few days. Mr. Bowers inquired about a peer review of the SCAMPER approach. Mr. Fitz responded that they are working with Clark County and the DRI to put together a package for peer review and publication. Mr. Bowers commented that the method is exciting since we will be able to determine if something is working very quickly.

Mr. Cleveland inquired about a statement made on the effect of street sweepers. Mr. Fitz replied that in some conditions sweepers can increase the emission rates. However, if there is a lot of material on the road, it is better to get it off before it is reentrained by vehicles.

Mr. Hyde inquired about how the results would compare to silt loadings. Ms. Arthur responded that the study has resulted in emission rates that will be applied to the inventory. She indicated that she has recently learned about the calibration factor and up until this point, 2.2 has been used. Ms. Arthur stated that 3.4 will make a big difference and it will likely increase the paved road emissions share of the inventory. Mr. Hyde asked about the dirtiest roads on the test route. Ms. Arthur replied that the areas with the highest concentrations were Higley and the Salt River Area. Mr. Fitz indicated that he did not expect the Clark County Study to agree well with AP-42. However, there was a good comparison on the test segment.

Ms. Arthur requested that Mr. Fitz describe the experiment with street sweepers from which he derived the conclusion that they are increasing the emission rates. She indicated that it is important to note that it was a controlled experiment and the roads were clean at the beginning. Mr. Fitz stated that he did not start the Clark County Phase IV Study with any intention of looking at the performance of street sweepers. In the study, a very clean road was closed and monitoring began before the study started. Mr. Fitz indicated that the first thing was to sweep the clean road. After the road was swept, there were higher emissions. He emphasized that he was not studying how well sweepers work.

Mr. Berry commented on leaving the dust to build up on the road versus sweeping to limit reentrainment. Mr. Fitz stated that the dust does not build up on roads because it is reentrained into the air by vehicles. He referred to a test in Clark County. Mr. Fitz stated that the equilibrium was reached by the 15<sup>th</sup> pass, depending upon the amount of material placed on the road. Mr. Berry asked if equilibrium will be reached regardless if the roads are swept. Mr. Fitz replied that equilibrium will be reached quickly with vehicles driving on the road. Mr. Berry asked if the material is be suspended in the air or deposited somewhere else to reach equilibrium. Mr. Fitz responded that the material is likely being deposited somewhere off the road.

Mr. Berry asked for advice on using street sweepers to remove dust. Mr. Fitz replied that he does not have enough information on street sweepers and he has not addressed their efficiency. He indicated that based on observation, it is better to have the material on the road removed by a sweeper than by a vehicle. A sweeper collects the material whereas a vehicle would reentrain it. Mr. Berry indicated that Swift Transportation is looking at what happens to the air around their trucks. He discussed the turbulence that causes dust to become suspended and the negative pressure behind the trailers. Mr. Berry mentioned changes that can reduce the turbulence. He stated that there is a fuel and possibly a reentrainment benefit. Mr. Fitz stated that it would likely have a benefit and referred to a DRI study on large vehicles that would pick up materials from unpaved shoulders. He noted that the road traveled makes a difference. Mr. Berry indicated that the Department of Energy has sponsored the research for saving fuel; however, there may be a reentrainment benefit.

## 9. Ozone Control Measures

Mr. Hyde discussed additional potential ozone control measures. He indicated that the region is still nonattainment for the eight-hour ozone standard. For the last two years, there have been values of 84 and 83 parts per billion (ppb), respectively. He noted that a value of 85 ppb would be a violation. Mr. Hyde indicated that EPA will likely propose a more stringent ozone standard of 70 ppb, which

would result in only four of the 35 ozone monitoring stations operating in 2005 being in compliance. With a more stringent standard on the verge of being proposed, ADEQ is suggesting that the Committee recommend three ozone control measures: ban on open burning during the ozone season, expand Area A, and liquid leaker test. He indicated that the measures have benefits of reducing volatile organic compounds and nitrogen oxides.

Mr. Bowers discussed ozone formation and higher readings in the East Valley. He asked if the measures could be more specific in prohibition. Mr. Bowers stated that at certain times of the day, an open burn would not be contributing to ozone formation. Mr. Hyde commented on conducting open burning when ventilation is best. He acknowledged that some locations would contribute more to high ozone concentrations than others.

Brian O'Donnell, Southwest Gas Corporation, inquired about expanding Area A. Mr. Hyde stated that ADEQ is proposing to increase Area A which would expand the Vehicle Inspection and Maintenance Program, Stage II Vapor Recovery, and cleaner burning gasoline. Mr. O'Donnell commented that expanding Area A would also result in new emission limits on industry. He discussed the long negotiations that occurred the last time Area A was expanded. Mr. Hyde mentioned the air pollution permit process. He provided background information on Area A and inquired about additional industrial controls applying to Area A. Ms. Crumbaker replied that for major source New Source Review purposes, the scope is the nonattainment area.

Mr. O'Donnell commented on lowering the emission standards for industry to move into new locations. He indicated that the Committee needs to be clear on the impacts of expanding Area A. Mr. Hyde stated that expanding Area A would require vehicles to be inspected and maintained, the use of Stage II Vapor Recovery equipment at retail gas stations, and the use of cleaner burning gasoline. He indicated that the expansion area is to the west of the existing Area A boundary. According to general plans, the expanded area is going to be mostly occupied.

Ms. Bauer referred to the Strawman Area A Expansion map provided by ADEQ and asked if the expanded Area A would have the same measures included in the existing Area A boundary. She noted that Mr. Hyde only mentioned three measures being applied to the expanded area. Mr. Hyde mentioned concerns raised by Pinal County. He indicated that he does not have the details and it may depend on the timing. Ms. Bauer inquired about the equitability of the proposed measure to expand Area A which would have only the three measures mentioned applying to the expanded area west of the existing boundary and the existing Area A would continue to have all the current measures associated with it.

Mr. Cleveland inquired about the difference between the map provided in the agenda packet and the one distributed to the Committee. Mr. Hyde replied that the Strawman Area A Expansion map provided to the Committee is the most current proposal. Ms. Arnst indicated that the Strawman Area A Expansion map provided to the Committee is only the western expansion of the proposal included in the agenda packet. Mr. Hyde stated that the measure would expand Area A 12 miles to the west and 12 miles in the northwest corner. Ms. Arnst indicated that ADEQ is suggesting that the three measures proposed for the expanded Area A appear to be very effective at reducing ozone. She stated that it would be up to the Committee to recommend any other existing Area A measures be applied to the expanded area. Ms. Arnst indicated that the measure could be a contingency measure since the values are so close. She mentioned that the EPA General Preamble and Addendum for the

Eight-Hour Ozone Standard indicates that unless a region is below the actual standard, EPA will not redesignate the region. Ms. Arnst stated that the design value would need to be 80 ppb.

Vic Dugan, Exxon Mobil, referred to the Strawman Areas A and B Expansion and Arizona Land Ownership map included in the agenda packet. He requested clarification that the proposed Area A expansion measure no longer refers to the southeast expansion and just the area to the west. Ms. Arnst responded that in reference to the comments by Pinal County and the jurisdiction of the Committee, only the western expansion is being proposed.

Mr. Berry inquired about applying all the control measures in the existing Area A boundary to the expanded Area A. Ms. Arnst replied that it would be up to the Committee to decide which measures would be applied to the expanded area. She stated that if the purpose is to focus on ozone controls, the Vehicle Inspection and Maintenance Program, Stage II Vapor Recovery, and cleaner burning gasoline would be applied.

Mr. Berry mentioned discussion of control measures at the legislature. He indicated that people were nervous about expanding Area A because of the possibility of unintended consequences. Mr. Berry stated that there was agreement that some of the measures were good common sense and should be applied without expanding Area A. He asked if the ADEQ proposal before the Committee is the same as that proposed by ADEQ at the legislature. Mr. Bowers stated that there is a difference between the proposals. He indicated that the discussion at the legislature included the southeast portion of the expanded Area A and the point was to authorize the county without changing the Area A boundary. Mr. Berry commented on trying to avoid any unintended consequences of changing the Area A boundary.

Ms. Fish asked what is occurring in the proposed expanded area to the west of the existing Area A that is a concern. She asked if congestion, power plants, and power generation plants are being targeted. Mr. Hyde responded that the proposal would expand cleaner burning gasoline, a liquid leaker test, Vehicle Inspection and Maintenance Program, and ban on open burning during the ozone season. At the present time, there is not a large amount of hydrocarbons and nitrogen oxide emissions from the expanded area. He noted that there will be more benefit in the future.

Mr. Hyde inquired about existing measures applicable to the current Area A boundary being automatically expanded to the larger Area A boundary. Ms. Arnst commented on drafting language to limit the measures applied to the expanded area. Ms. Fish inquired about the expanded area. Ms. Arnst mentioned the homes planned in the expanded area and the associated trips.

Mr. Hajduk indicated that he would like a better understanding of the possible action for this agenda item. Mr. Berry moved that action on potential ozone control measures be tabled until the next meeting. Ms. Fish seconded and the motion passed unanimously.

#### 10. Call for Future Agenda Items

Mr. Cleveland announced that the next meeting of the Committee is tentatively scheduled for April 26, 2007 at 1:30 p.m. With no further comments, the meeting was adjourned.